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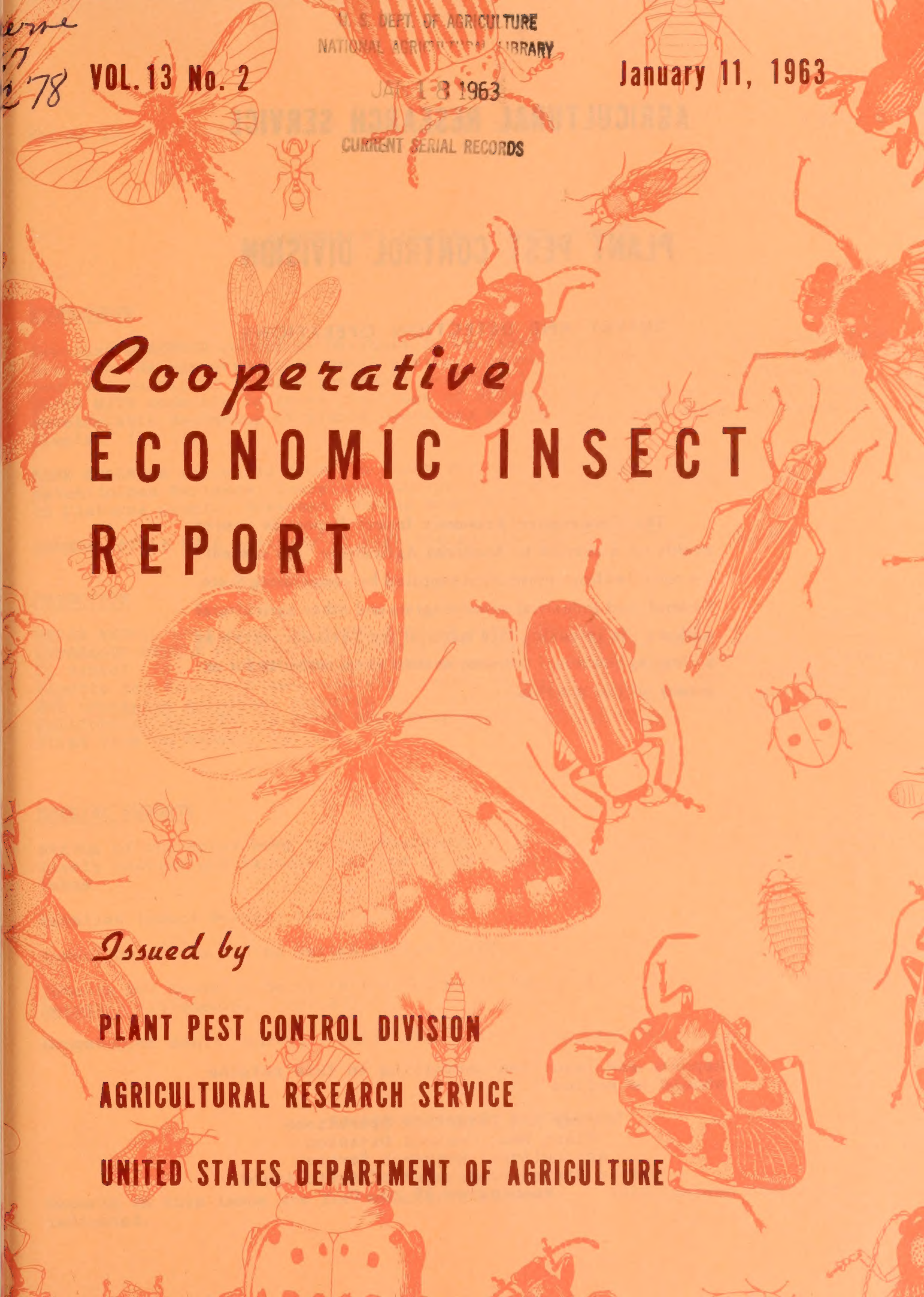

Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Volume 13 January 11, 1963 Number 2

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Heaviest GREENBUG counts in Oklahoma in Garfield County; up to 30 per linear foot with some damage evident in small grains. Counts 0-20 per linear foot in other counties surveyed. Counts generally 5-10 per linear foot or less in Texas. A GRASS MITE moderate in local plantings of dryland wheat in Moore County, Texas; considerable deadening of plants occurring and webbing conspicuous on crowns of plants. (p. 11).

PINK BOLLWORM recovered from gin trash machines in De Soto, Bossier and Natchitoches Parishes, Louisiana, during November, and one specimen collected in Cleburne County, Arkansas, during same month. (p. 13).

COMMON CATTLE GRUB activity at high degree throughout Oklahoma. (p. 14).

DETECTION

PECAN WEEVIL confirmed for first time in Glasscock County, Texas (p. 12); SPOTTED ASPARAGUS BEETLE recorded in Scotts Bluff County, Nebraska (most western record in State) (p. 12); IMPORTED FIRE ANT found for first time in Liberty, Rockdale, Fayette and Ware Counties, Georgia, during November (p. 17); and a LEPTOPODID BUG (Patapius spinosus) reported for first time in Glenn and Butte Counties, California (p. 17). A STINK BUG (Brochymena quadripustulata) recorded for first time in Hawaii. (p. 17).

SPECIAL REPORTS

Status of the Screw-worm in the Southwest. (p. 15). Counties reporting comparatively heavier populations continue to be those in the Uvalde-Val Verde area of Texas.

Hawaiian Insect Notes. (p. 17).

Insect Detection in the United States - 1962. (p. 18).

Insects Not Known to Occur in the United States (Old World screw-worm, Chrysomya bezziana Villeneuve). (p. 23).

Grasshopper Adult Survey - Fall 1962. (following page 24).

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Reports in this issue are for week ending January 4, 1963, unless otherwise indicated.

WEATHER OF THE WEEK ENDING JANUARY 7

A vast low pressure system off the Maine coast, that was responsible for blizzard conditions in the Northeast during the close of the previous period, moved out slowly and kept cold Canadian air flowing across the Northeast the first 3 days of the period. Central and eastern Maine spent most of the week digging out of deep snow drifted 20 feet high in places. Temperatures rose all week in the Northeast, the greatest rise occurring in Maine where temperatures were above normal after January 2 and averaged 10° to 15° above normal for the week.

From southern and western New England to Lower Michigan and southward to the Gulf of Mexico, temperatures for the week averaged below normal by 3° to as much as 9°. Freezing occurred on 4 to 5 days in northern and western Florida and on 2 or 3 days in low spots in central portions of the State the latter half of the week.

The week was unseasonably warm west of the Great Lakes, where daytime maxima ranged in the 40's and 50's and temperatures for the week averaged as much as 15° above normal along the Canadian Border. Temperaturewise the week was about normal in the central and lower Great Plains, but below normal by 3° to 6° in parts of the Far Southwest.

Precipitation was negligible in most of the Nation. Significant amounts fell along the north Pacific coast and in western Washington where weekly totals ranged up to 2 inches. From the southern Rocky Mountain region to the Atlantic coast, several small areas reported 0.50 inch or more. In an area extending from southeast Kansas southward through Louisiana and east Texas, a few stations reported more than an inch.

After a mostly dry week in the interior of the Far West, the mountain snowpack there remained below normal for the time of year. Utah reported that the water outlook for the coming year is grim at this time. In Washington, the mountain snowpack is about half the seasonal normal.

Snow cover in the Great Lakes region decreased only slightly during the week and depths now range up to 10 inches in northern Michigan. In the Northeast, the snow cover extends southward to Washington, D. C., at lower elevations, except along the immediate coast. At Millenocket, Maine, where the snow was 45 inches deep at the end of the previous week, the depth is now 32 inches.

Considerable fog and drizzle occurred in the central Great Plains and middle Mississippi Valley. During a 4-day period of fog in northern Missouri the temperature changed only 3° to 4°. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GREENBUG (Toxoptera graminum) - OKLAHOMA - Heaviest counts of up to 30 per linear foot reported from Garfield County, with some damage evident. Lower counts of 0-20 per linear foot reported in Blaine, Major, Custer, Tillman, Kiowa, Mayes, Muskogee and Wagoner Counties. Counts in Muskogee and Wagoner areas reduced from those previously reported. (Okla. Coop. Sur.). TEXAS - Reports during period December 23, 1962, through January 4, 1963, indicate very light to no infestations; counts generally 5-10 per linear foot or less. (Texas Coop. Rpt.). NEW MEXICO - Ranged 6-10 per linear foot in grain fields checked in Artesia area, Eddy County. (N. M. Coop. Rpt.).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Light counts of 1 and 7 per linear foot, respectively, reported from Roger Mills and Major Counties. (Okla. Coop. Sur.).

APPLE GRAIN APHID (Rhopalosiphum fitchii) - OKLAHOMA - Light counts reported in scattered portions of northwest, west central, southwest and east central areas. (Okla. Coop. Sur.).

ENGLISH GRAIN APHID (Macrosiphum granarium) - ARKANSAS - Numbers low in small grains; less than 100 per 100 sweeps in northwest. (Ark. Ins. Sur.). OKLAHOMA - Light in northwest, west central, southwest and east central areas; fewer than 10 per linear foot. (Okla. Coop. Sur.).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - OKLAHOMA - Active larvae averaged 20 per 25 cornstalks in Beckham County, with 100 percent stalk girdling. (Okla. Coop. Sur.).

CEREAL LEAF BEETLE (Oulema melanopa) - INDIANA - Two additional corn fields found infested. Adults found in lower leaf whorls of the plants in below-freezing temperatures. Corn from fields was fumigated. (PPC, Cent. Reg., Nov. Rpt.).

A CRAMBID (Chilo loftini) - CALIFORNIA - Larvae heavy in sugarcane in East Mesa area, Imperial County. (Cal. Coop. Rpt.).

A GRASS MITE (Oligonychus sp.) - TEXAS - A species, very similar to O. pratensis, moderate in local plantings of dryland wheat in Moore County. Considerable deadening of plants occurring; webbing conspicuous on crowns of plants. (Swaim).

PEA APHID (Macrosiphum pisi) - OKLAHOMA - Ranged 16-20 per square foot of crown area on alfalfa in Tillman County; averaged 25 per linear foot on winter peas. (Okla. Coop. Sur.). ARKANSAS - Ranged 1-5 per square foot in northwest area legumes. (Ark. Ins. Sur.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Counts of 10-16 per square foot of crown area noted in young and old stands of alfalfa in Tillman County. (Okla. Coop. Sur.). NEW MEXICO - Generally light in alfalfa in southern counties. Treatment required in one field of seedling alfalfa in Eddy County. (N. M. Coop. Rpt.).

Noctuids in Arkansas - Heliothis spp. on soybeans and sorghum received considerable attention in State during 1962. One of several lines of study was determination of species on these 2 crops. Larval collections have now been determined; collections from soybeans in southeast area September 5-12 were 238 CORN EARWORM (H. zea) and no TOBACCO BUDWORM (H. virescens). Collections from sorghum in same area September 13 to 26 were 69 H. zea and no H. virescens. (Ark. Ins. Sur., Dec. 21).

FRUIT INSECTS

WESTERN PEACH TREE BORER (Sanninoidea exitiosa graefi) - CALIFORNIA - Light in roots of peach tree stock in Brentwood area, Contra Costa County. (Cal. Coop. Rpt.).

PECAN WEEVIL (Curculio caryae) - TEXAS - Full-grown larvae found in Burkett variety pecan nuts in Glassock County. This is first confirmed record for this county. Extent of infestation not indicated. (Texas Coop. Rpt., Newton).

CITRUS BLACKFLY (Aleurocanthus woglumi) - MEXICO - Biological Control Zone - Inspections made in Municipios Hidalgo and Guemez, Tamaulipas, of 47,276 citrus trees on 32 properties revealed 11 trees lightly infested on 5 properties in Guemez; none found in Hidalgo. Treatment necessary in 2 groves in Padilla, Tamaulipas, to reduce heavy infestations to point where parasites could assure control. Infestation at Simojove, Chiapas, under satisfactory control; during November, 40,600 specimens of a PARASITIC EULOPHID (Prospaltella opulenta) received for liberation. Expected seasonal decline in parasitism occasioned by insecticide drift from cotton-dusting operations now apparent in Apatzingan area, Michoacan; decline expected to continue until February or March. Chemical Control Zone - Inspection of 122,358 trees on 3,813 properties in States of Tamaulipas, Sonora, Nuevo Leon and Baja California negative. (PPC, Mex. Reg., Nov. Rpt.).

COTTONY-CUSHION SCALE (Icerya purchasi) - CALIFORNIA - Nymphs light on leaves of navel orange trees in Arlington, Riverside County. (Cal. Coop. Rpt.).

TRUCK CROP INSECTS

SPOTTED ASPARAGUS BEETLE (Crioceris duodecimpunctata) - NEBRASKA - Was quite abundant on asparagus during July and August at Scotts Bluff Experiment Station, Scotts Bluff County. (Hagen, Hill). Previously recorded in Lancaster County in 1945. However, this is most western record and new for Scotts Bluff County. (Bergman).

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - Field inspections in TEXAS control counties completed November 2. Infestations lighter than in 1961,with exception of Cherokee County. In LOUISIANA, 95 new properties found infested; all known infested parishes, with exception of one property in Caddo Parish, cleaned and dusted. Infested properties found in Amite, Copiah, Forrest, Pike and Perry Counties, MISSISSIPPI. Infestation at Gloster, Amite County, especially heavy; about one-fourth of sweetpotatoes inspected in Pike County rejected. Survey conducted in all known infested counties in ALABAMA; new properties found in Mobile, Geneva and Houston Counties; none in commercial plantings. In GEORGIA, infested properties found in Appling, Atkinson, Colquitt, Decatur, Grady, Lowndes, Pierce and Thomas Counties. Infestation in Atkinson County first since 1957. Field inspections completed in FLORIDA; approximately 26,000 bushels of sweetpotatoes dusted during November. (PPC, South.Reg.). NEW JERSEY - Postharvest field inspections of sweetpotatoes almost completed; dissection of tunnels revealed no larvae. (PPC, East. Reg., Nov. Rpt.).

TOMATO PINWORM (Keiferia lycopersicella) - CALIFORNIA - Heavy in tomato plants at Shafter Research Station, Kern County. (Cal. Coop. Rpt.).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - CALIFORNIA - Heavy on garden rhubarb (Rheum rhaponticum) in Pico Riviera area, Los Angeles County. (Cal. Coop. Rpt.).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - One specimen collected in Cleburne County, ARKANSAS; location of field not determined. Gin trash inspections made in 18 southern LOUISIANA parishes; specimens recovered from De Soto, Bossier and Natchitoches Parishes. Larva from Bossier Parish first found since 1958 crop; larva from Natchitoches Parish first since 1959 crop. Infestations heavier than usual in Parmer and Bailey Counties, TEXAS; 13 adults caught in blacklight traps at Brownsville, Cameron County, and 3 adults at Waco, McLennan County, during November. (PPC,South. Reg.). In Graham County, ARIZONA, 405 larvae found in gin trash inspections during November. In Stafford work area, 1,452 larvae found on lint cleaner inspections. Field inspections in county revealed 10 newly infested fields involving 545 acres in Solomon and Eden areas. Lint cleaner inspections indicate increase in Pecos River Valley and other cotton-growing areas of eastern NEW MEXICO. Indications are infestations in Rio Grande Valley and other areas in southwestern part of State are lighter than in past several years. (PPC, West. Reg., Nov. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

RED TURPENTINE BEETLE (Dendroctonus valens) - MONTANA - Attacked approximately 75 percent of residual ponderosa pines in stand thinned during late spring on Northern Cheyenne Indian Reservation. Full circumference of lower bolls, often up to 4 feet from ground, infested. (Tunnock, Roemhild, Dec. 28).

MOUNTAIN PINE BEETLE (Dendroctonus monticolae) - MONTANA - Approximately 0.9 percent of stand of lodgepole pine in Glacier National Park attacked in October; infestation has been active since 1950. (Tunnock, Roemhild, Dec. 28).

ENGRAVER BEETLES (Ips spp.) - MONTANA - I. integer and I. ponderosae heavily infested slash in ponderosa pine stands thinned from May through July on the Northern Cheyenne Indian Reservation. This slash was treated with orthodichlorobenzene in July. These beetles also emerged from ponderosa pine slash cut during January and February on Lone Pines Area of Custer National Forest; also infested current logging slash in July. I. ponderosae attacked occasional overmature ponderosa pines in weakened condition during July near Ekalaka, Carter County. One tree contained callow adults. (Tunnock, Roemhild, Dec. 28). CALIFORNIA - I. montanus adults heavy in bark of ornamental pine in Woodside, San Mateo County. (Cal. Coop. Rpt.).

A BARK BEETLE (Hylastes ruber) - MONTANA - Beetles numerous under bark of a dying Douglas-fir on shore of Flathead Lake in Flathead and Lake Counties. (Tunnock, Roemhild, Dec. 28).

A BARK WEEVIL (Pissodes curriei) - MONTANA - Larvae feeding around root-collars of 10 white pines 2-10 inches in diameter in Fish Creek Campground, Glacier National Park. Larvae had constructed "chip cocoons" in sapwood; 3 of smallest trees killed. (Tunnock, Roemhild, Dec. 28).

RUSTY TUSSOCK MOTH (Orgyia antiqua) - MONTANA - Egg masses found in November on subalpine fir near Kalispell and on Douglas-fir near Olney; both locations in Flathead County. Olney infestation covers quite a large area. (Tunnock, Roemhild, Dec. 28).

LODGEPOLE NEEDLE MINER ("Recurvaria" milleri) - MONTANA - Very heavy on approximately 3,000 acres of lodgepole pine during August south of Butte, Silver Bow County. (Tunnock, Roemhild, Dec. 28).

A PINE NEEDLE-SHEATH MINER (Zelleria haimbachi) - MONTANA - Reported causing some damage to 5-year-old ponderosa pine plantation east of Libby, Lincoln County. Moderate on approximately 4,000 acres of lodgepole pine in Bridger Mountains north of Bozeman (Gallatin County) during August; infestation first detected in 1960. Generally, this species has spread throughout pine stands in western half of State. (Tunnock, Roemhild, Dec. 28).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - MONTANA - Heavy on approximately 1,200 acres of lodgepole pine on north shore of St. Mary Lake, Glacier National Park; some mortality has occurred. Light infestation detected on this host in Blacktail Creek drainage, Deerlodge National Forest. Also, caused some damage to spruce trees near a home northeast of Denton, Fergus County. (Tunnock, Roemhild, Dec. 28).

A DOUGLAS-FIR NEEDLE MIDGE (Contarinia pseudotsugae) - MONTANA - Caused noticeable discoloration of current needles in Douglas-fir stand on Warland Ranger District, Kootenai National Forest. In general, populations range light to medium throughout Douglas-fir stands in State. (Tunnock, Roemhild, Dec. 28).

CONIFER SAWFLIES (Neodiprion spp.) - MONTANA - Larval colonies of N. nanulus contortae and N. fulviceps complex were scarce during July in areas of lodgepole and ponderosa pines containing heavy populations last season in the Little Rocky Mountains. A polyhedrosis virus was probably responsible for reducing this infestation. (Tunnock, Roemhild, Dec. 28).

GYPSY MOTH (Porthetria dispar) - Egg clusters found and treated in 8 trailer parks in MASSACHUSETTS during November. Appreciable numbers of egg masses found on evergreen plants in nursery in western Massachusetts. New infestations found on perimeter of 4 nurseries on Long Island, and 2 nurseries in Westchester County, NEW YORK. Infestation in Pike County, PENNSYLVANIA, yielded 6 additional egg masses. (PPC, East. Reg.).

BROWN-TAIL MOTH (Nygmia phaeorrhoea) - Webs collected on Plum Island, MASSACHUSETTS, in early October, placed in humidity-controlled environment on October 26. First larval emergence from webs noted November 14. About 25-30 out of nest and feeding lightly November 20. By end of month, about 500 larvae were feeding on tender oak; a few into first molt. (PPC, East. Reg.).

AN APHID (Capitophorus hippophaes) - MONTANA - Eggs, probably of this species, very heavy on Russianolive seedlings in November at Montana Forest Nursery in Missoula, Missoula County. (Tunnock, Roemhild, Dec. 28).

COCCIDS - CALIFORNIA - Saissetia oleae and Coccus hesperidum heavy on iris plants in Sacramento, Sacramento County. (Cal. Coop. Rpt.).

AN ERIOPHYID MITE (Aceria sp.) - CALIFORNIA - This new bamboo bud mite reported from 3 new nursery locations in Ventura, Santa Barbara and Los Angeles Counties. (Cal. Coop. Rpt.). Also, see CEIR 12(49):1233.

INSECTS AFFECTING MAN AND ANIMALS

COMMON CATTLE GRUB (Hypoderma lineatum) - OKLAHOMA - High degree of activity reported throughout State. (Okla. Coop. Sur.).

A BOT FLY (probably Cephenomyia sp.) - TEXAS - Several hundred larvae found in esophagus of deer killed in Mason County. No ill effects resulting from these larvae apparent in animal. (Garrett).

HOG LOUSE (Haematopinus suis) - OKLAHOMA - Reported heavy on hogs in Bryan and Choctaw Counties. (Okla. Coop. Sur.).

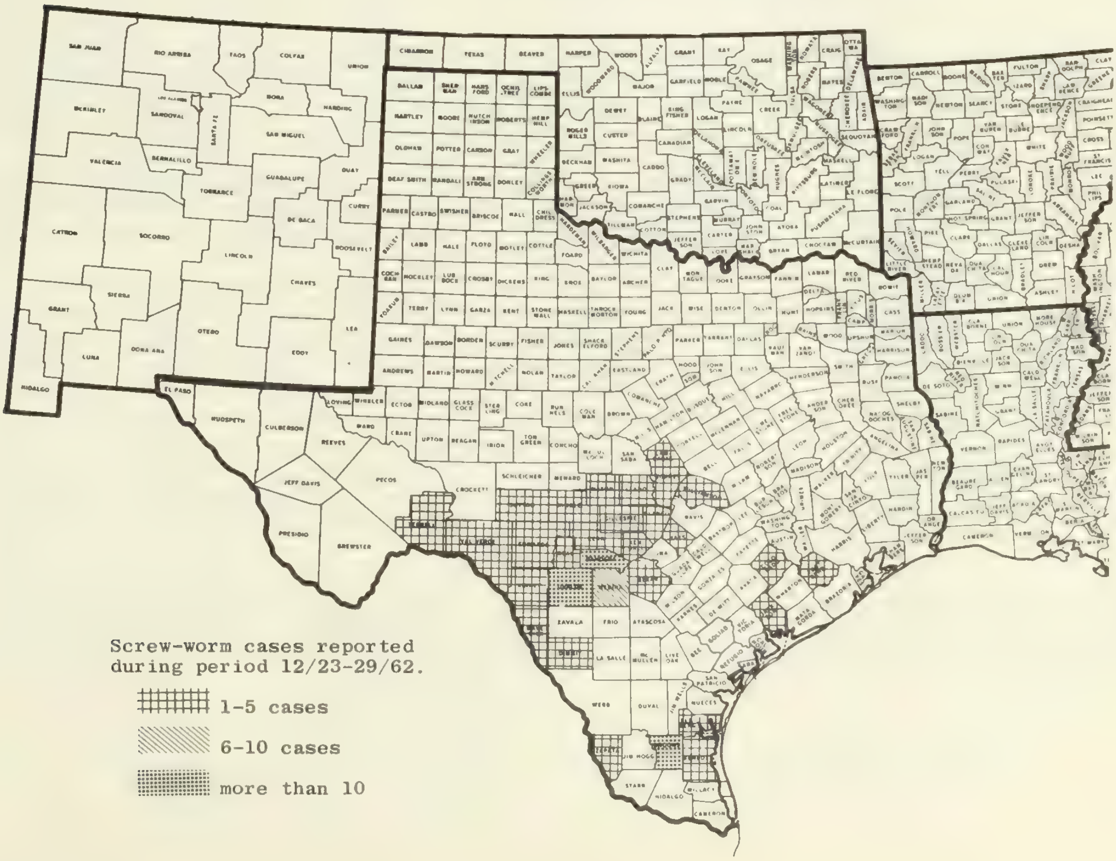
CATTLE LICE - OKLAHOMA - Several species active in Bryan and Latimer Counties. (Okla. Coop. Sur.).

A WASP - OKLAHOMA - Overwintering populations causing some concern around homes on warm days in Choctaw County and Stratford areas. (Okla. Coop. Sur.).

STATUS OF THE SCREW-WORM (Cochliomyia hominivorax) IN THE SOUTHWEST

A total of 66,039,050 sterile flies was released during the period December 16-22, although cold weather, rain and fog hampered release on many days in the release area. A total of 130 screw-worm cases was reported during this period. Weather and temperatures permitting, sterile fly barrier was gradually extended northward and westward along Texas-Mexican border, at times extending as far north as beginning of Big Bend region of the Rio Grande. From reports and specimens submitted, screw-worm continued to show reduced populations; however, reports indicated relatively heavier populations existed in densely livestock-populated areas surrounding Uvalde County.

During period December 23-29, a total of 41,057,050 sterile flies was released, although weather conditions periodically restricted release in some areas. Constant daily adjustments must be made in areas where flies can be released and in number of flies released. Release continues in barrier northward and westward along Texas-Mexican border to approximately beginning of Big Bend region of Rio Grande. Reports continue to show fewer screw-worm infestations each week; however, counties reporting comparatively heavier populations continue to be those in the Uvalde-Val Verde area. A total of 110 screw-worm cases was reported during period December 23-29. (Anim. Dis. Erad. Div.).



Screw-worm cases reported during period 12/23-29/62.

▦ 1-5 cases

▨ 6-10 cases

▩ more than 10

HOUSEHOLD AND STRUCTURAL INSECTS

BROWN-BANDED COCKROACH (Supella supellectilium) - UTAH - Infesting several apartments at Logan, Cache County. (Knowlton).

AN ALFALFA WEEVIL (Hypera brunneipennis) - CALIFORNIA - Heavy numbers invading home in Carlsbad area, San Diego County. This weevil has become a household nuisance in several locations where it occurs. (Cal. Coop. Rpt.).

A BARK BEETLE (Pseudopityophthorus pubipennis) - CALIFORNIA - Medium numbers occurring on window ledges and around lights in home in Santa Maria, Santa Barbara County. (Cal. Coop. Rpt.).

A PARASITIC ENCYRTID (Comperia merceti) - OKLAHOMA - This parasite of cockroaches causing some nuisance around homes in Stillwater area, Payne County. (Okla. Coop. Sur.).

MISCELLANEOUS INSECTS

CITRUS WHITEFLY (Dialeurodes citri) - CALIFORNIA - Surveys in City of Sacramento to date reveal over 200 blocks infested within area approximately 4 miles long and 2 miles wide. During past 5 years, several infested blocks in east Sacramento and Oak Park Fairgrounds areas inspected in connection with 1958 infestation and in course of normal detection effort; however, whitefly infestation either too light to be detected or had not spread to present extent. Review and inspection of all old infestations dating back to 1907 planned. At present time, apparently 400 blocks will be subject to treatment attention. (Cal. Coop. Rpt.).

JAPANESE BEETLE (Popillia japonica) - CALIFORNIA - First of 3 adults emerged in test cage December 25, 1962; 2 others emerged January 1, 1963. These are progeny of 3 adult pairs collected June 12, 1962, in West Sacramento, Yolo County. Adults caged in office where temperatures ranged 70-75°. Females died August 8 and 18, and September 9; males died August 8, 9 and 28. Females observed to enter soil for periods up to 24 hours during mating period; males usually entered soil overnight. Mating continued during life of adults; males and females were marked for easy identification. First to third-stage larvae observed late in September. Activity of out-of-season beetles to be observed and check to be made, if males and females emerge, to determine if additional generation is produced under artificial conditions. If additional generation is produced under these conditions, there is possibility an infestation in some mild-climate areas of State could also produce an additional generation in heated patios, greenhouses and sod areas around heated swimming pools. (Cal. Coop. Rpt.).

WHITE-FRINGED BEETLES (Graphognathus spp.) - Aerial treatment completed in infested area in Poinsett and St. Francis Counties, ARKANSAS. Small, new infestation found in Crittenden County. Aerial application in Greene County, TENNESSEE, completed and additional acreage treated in Lawrence, Hardeman and Tipton Counties. Checks made in these areas showed only minor damage to wildlife. Larvae damaged sweetpotatoes in Jones County, MISSISSIPPI. Treatment completed on isolated infestation in Sumter County, ALABAMA. Infestation in Cuthbert, Randolph County, GEORGIA, treated during November. Small areas in Bleckley, Hancock, Peach, Toombs, Twiggs and Wilcox Counties also treated. (PPC, South. Reg.).

EUROPEAN CHAFER (Amphimallon majalis) - Final control treatments applied to garden patches at residences in Hudson County, NEW JERSEY. Soil treatment started November 23 at Cypress Hills Cemetery, Queens County, NEW YORK. (PPC, East. Reg.)

A LEPTOPODID BUG (*Patapius spinosus*) - CALIFORNIA - Medium under boards along railroad tracks in Willows, Glenn County, and in Nord, Butte County; new counties. Collected by T. Haig, Jr.; det. by R. L. Usinger. Species unknown in Western Hemisphere prior to 1941, when single female was collected by S. F. Bailey in Arbuckle, Colusa County. (Cal. Coop. Rpt., Dec. 21).

IMPORTED FIRE ANT (*Solenopsis saevissima richteri*) - Collections made for the first time in Liberty, Rockdale, Fayette and Ware Counties, GEORGIA, during November. (PPC, South. Reg.). Surveys negative in Haskell County, OKLAHOMA. (Okla. Coop. Sur.).

HAWAIIAN INSECT NOTES

The following notes were submitted by the Hawaiian Entomological Society and were extracted from the "Notes and Exhibitions" in the minutes of the December 10, 1962,meeting.

A STINK BUG (*Brochymena quadripustulata*) - A specimen was collected on empty fertilizer bags by Masao Kaneshiro on his farm on Puhawai Road, Lualualei Valley, Oahu, about October 1962. Mr. Kaneshiro stated that he had first seen this species at his farm about a year ago. Determination made by Dr. Herbert Ruckes. This bug is widely distributed across southern Canada, the United States from the Atlantic to the Pacific coasts, and in northern Mexico. Hosts include *Pinus*, *Sorbus*, *Quercus*, *Salix*, *Ulmus*, grape, cherry, apple and pear, and is also predaceous on soft-bodied larvae. Adults hibernate under bark or rubbish. This is the first report of this pentatomid bug from the State. (N. L. H. Krauss).

A heavy infestation of BARNACLE SCALE (*Ceroplastes cerripediformis*) on branches of zitherwood (*Citharexylum* sp.), a street-growing tree, was reported in December 1962 by Walter Holt, State Forester. Det. by J. W. Beardsley. This is a new host record. (N. L. H. Krauss).

Galls of an ERIOPHYID MITE (*Aceria swezeyi*) were very conspicuous on branches of lama (*Diospyros ferrea* var. *pubescens* form *sclerophylla* Fosberg) at Puuwaawaa Ranch, North Kona, Hawaii, on October 29, 1962. This species was described from Oahu by H. H. Keifer, and present determination was made by him. (N. L. H.Krauss).

A BILLBUG (*Sphenophorus venatus vestitus*) is established at Kaanapali, Maui. This is the first record for this island and the fourth island infested since the species was first discovered at Hickam Field in 1960. (H. Nakao, N. Miyahira).

A EUCOSMID MOTH (*Cryptophlebia* sp.) was very active in terminal shoots of rainbow showertrees in Hilo, Hawaii, and also active on Kauai. These are new records for the islands of Hawaii and Kauai. (E. Yoshioka, C. J. Davis, S. Au).

INSECT DETECTION IN THE UNITED STATES - 1962

FIRST UNITED STATES REPORT

Species	Host	State	County	CEIR Vol. 12 Page No.
Achanodes antipathetica (a tineid moth)	---	Florida	Dade	958
*Aculus pelekassi (a rust mite)	citrus	Florida	Orange	434
*Ceratophyus sp. (a scarab)	lawns, golf courses	California	Santa Barbara	85
Culicoides blantoni (a sand fly)	light trap	Texas	Cameron	529
*Dictyla echii (a lace bug)	---	Pennsylvania	Dauphin	778
*Oulema melanopa (cereal leaf beetle)	cereal crops	Michigan	Berrien	881
Pseudaonidia clavigera (a mining scale)	Camellia sp., Gardenia sp., Jasminum sambac, Ligustrum sp., Osmanthus sp., Pyracantha sp., Quercus sp., Rhododendron sp., Viburnum sp.	Florida	Pinellas	494 534

FIRST STATE REPORT

Species	Host	State	County	CEIR Vol. 12 Page No.
Acanthomyops pogonogynus (an ant)	---	Idaho	Latah	810
Acarapis dorsalis (a bee mite)	Apis mellifera	Nebraska	---	274
	Apis mellifera	Wyoming	Albany	274
Aceria neocynodonis (an eriophyid mite)	Bermuda grass	Florida	Brevard	551
	Bermuda grass	Georgia	Tift	1213
Aculus dubius (an eriophyid mite)	timothy	Rhode Island	Washington	378
Aedes vexans nocturnus (a mosquito)	light trap	Hawaii	Honolulu	107

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*Also new Western Hemisphere records.

First State Report (cont'd)

Species	Host	State	County	CEIR Vol. 12 Page No.
Antonina pretiosa (a scale insect)	bamboo	Maryland	Montgomery	73
Apion hibisci (a weevil)	Hibiscus oculiroseus	Maryland	St. Marys	599
Aspidiotus diffinis (an armored scale)	Mimosa sp.	Florida	Levy	525
Bittacus pilicornis (a hangingfly)	---	Florida	Alachua	574
Brachyrhinus rugosostriatus (a weevil)	---	Rhode Island	Bristol	1171
Bucculatrix canadensisella (birch skelentonizer)	red birch	Delaware	New Castle	833
Camponotus rasilis (a carpenter ant)	light traps	California	Imperial Riverside	777
Carpophilus melanopterus (a nitidulid)	---	Pennsylvania	Bucks	166
Cirrospilus nigrivariegata (a parasitic eulophid)	Phyllocnistis vitigenella	Delaware	New Castle	1218
Cornaphis populi (an aphid)	---	Utah	Rich	525
Crioceris asparagi (asparagus beetle)	asparagus	Nebraska	Lancaster	492
Cylas formicarius elegantulus (sweetpotato weevil)	---	New Jersey	Gloucester	730
Dermestes peruvianus (a dermestid)	bird cages	Wisconsin	Dane	41
Echidnophaga gallinacea (sticktight flea)	broilers	Delaware	Sussex	1190
Edessa bifida (a stink bug)	---	Virginia	Lancaster	4
Epinotia nanana (a spruce needle miner)	spruce	Delaware	New Castle	240
Epitrix brevis (a leaf beetle)	Physalis sp.	Maryland	Prince Georges	73
Epitrix humeralis (a leaf beetle)	Physalis subglabrata	Maryland	Washington	73
Essigella knowltoni (an aphid)	Pinus sp.	Wyoming	Lincoln	105

First State Report (cont'd)

Species	Host	State	County	CEIR Vol. 12 Page No.
Euborellia annulipes (red-legged earwig)	---	North Dakota	Cass	574
Eumerus strigatus (onion bulb fly)	tulip bed	Montana	Pondera	858
Fenusa pusilla (birch leaf miner)	white birch	Washington	King	771
Galerucella xanthomelaena (elm leaf beetle)	elm	New Mexico	Quay	975
Graphognathus leucoloma imitator (a white-fringed beetle)	---	Virginia	City of Norfolk	1143
Homadaula albizziae (mimosa webworm)	*Albizia* sp.	California	Butte	32
	---	Nebraska	Douglas	955
	black locust	Kansas	Wyandotte	1220
Hylurgopinus rufipes (native elm bark beetle)	*Ulmus americana*	Nebraska	Seward	1155
Hypera postica (alfalfa weevil)	---	Vermont	Bennington Windham	745
Labops hesperius (a mirid)	intermediate wheatgrass	Arizona	Coconino	788
Lecanium fletcheri (Fletcher scale)	*Thuja occidentalis*	California	Siskiyou	903
Lepidosaphes yanagicola (a coccid)	*Pachysandra* sp.	Maryland	Baltimore	600
Leucaspis japonica (a Japanese armored scale)	maple	Delaware	Sussex	1077
Listronotus oregonensis (carrot weevil)	carrots	Delaware	Sussex	1074
Lygocoris belfragei (a mirid)	*Ilex verticillata*	Maryland	Prince Georges	73
Macrocentrus calacte (a parasitic braconid)	*Cryptophlebia* sp.	Hawaii	---	426
Mantis religiosa (European mantis)	---	Delaware	New Castle	165
Mezium affine (a spider beetle)	---	Wyoming	Washakie	260
Miccotrogus picirostris (clover seed weevil)	soil around ladino clover	Maryland	Montgomery	945
Mindarus abietinus (balsam twig aphid)	Fraser fir tips	North Carolina	Yancey	385

First State Report (cont'd)

Species	Host	State	County	Ceir Vol. 12 Page No.
Monomorium destructor (an ant)	---	New York	Steuben	106
Musca autumnalis (face fly)	cattle	Rhode Island	Washington	775
Neorhynchocephalus volaticus (a nemestrinid fly)	---	Florida	Columbia	934
Newsteadia americana (a coccid)	roots of a tree	Pennsylvania	Dauphin	348
Norma dietsiana (a leaf tier)	American holly	Delaware	Sussex	703
Oulema melanopa (cereal leaf beetle)	---	Indiana	La Porte St. Joseph	915
Pealius azaleae (azalea whitefly)	azaleas	North Carolina	Wake	1188
Pheidole californica pyramidensis (an ant)	soil	California	Modoc	604
Phloeosinus canadensis (a bark beetle)	*Thuja occidentalis*	Ohio	Franklin	319
Phloeosinus dentatus (a bark beetle)	*Juniperus* sp.	Ohio	Washington	319
Phyllocnistis vitigenella (a grape leaf miner)	cultivated grapes	Delaware	New Castle	1214
Pityophthorus pulicarius (a bark beetle)	Austrian pine	Delaware	New Castle	1020
Platyptilia pica (a plume moth)	geraniums	Pennsylvania	Philadelphia Montgomery	976 1007
Podosesia syringae fraxini (ash borer)	ash trees	Utah	Utah	804
Podosesia syringae syringae (lilac borer)	lilac	Delaware	New Castle	1021
Pogonomyremx californicus (California harvester ant)	---	Utah	Grand	642
Pseudolucanus capreolus (a stag beetle)	---	Florida	Hillsborough	1041
Pycnarthrum hispidum (a bark beetle)	fig tree	Texas	Hidalgo	658
Reticulitermes virginicus (a subterranean termite)	---	Delaware	Kent	873

First State Report (cont'd)

Species	Host	State	County	CEIR Vol. 12 Page No.
Rhinacloa forticornis (a mirid)	light trap	Hawaii	Honolulu	842
Rhyzopertha dominica (lesser grain borer)	stored grain	Delaware	New Castle	1158
Scolytus mali (a bark beetle)	dying apple tree	Ohio	Medina	794
Sitona cylindricollis (sweetclover weevil)	roadside sweetclover	New Mexico	Sandoval	992
Spathius prusias (a parasitic braconid)	a weevil (Araecerus sp.)	Hawaii	Honolulu	426
Toumeyella pini (a pine tortoise scale)	a mugho pine	Indiana	Madison	321
Urbanus proteus (bean leaf roller)	---	Delaware	New Castle	195
Xyleborus morstatti (a bark beetle)	Tabebuia pallida	Hawaii	Honolulu	76

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

OLD WORLD SCREW-WORM (Chrysomya bezziana Villeneuve)

Economic Importance: This is the most important myiasis-producing calliphorid in areas of Africa and Asia. It is reported to rank second in importance to the tsetse flies as a pest of cattle in central and southern Africa, and is of considerable importance as a pest of man in India. Cattle are the chief hosts, by and large, but man is apparently attacked with relatively more frequency in India than in other parts of the fly's range. Larvae may attack wounds on various parts of the body; in man, infestation of head wounds seems most frequent. C. bezziana is a specific myiasis-producing fly; it cannot breed in carrion or excrement, and is dependent upon living tissue for its existence. Its habits are similar to the American screw-worm (Cochliomyia hominivorax (Coquerel)) in this respect.

The genus Chrysomya is confined to the Old World, and restricted to the tropical and semi-tropical regions. James (2) also lists 7 other species: C. chloropyga (Wiedemann) is the most important sheep maggot in South Africa, but the other species, C. marginalis (Wiedemann), C. megacephala (Fabricius), C. albiceps (Wiedemann), C. rufifacies (Macquart), C. putoria (Wiedemann) and C. micropogon (Bigot) are primarily secondary invaders or scavengers, and are not generally regarded as major pests. They might be compared with the secondary screw-worm (Cochliomyia macellaria (Fabricius)) of the Americas when considering their importance. Occasionally, however, some form of myiasis is attributed to some of the aforementioned Chrysomya, but C. bezziana is by far the most important of the species.

Distribution: Central and southern Africa, and parts of Asia (India, Ceylon, Burma, Thailand, Indo-China, Philippines).

Hosts: Numerous wild and domestic animals, as well as man.

Life History and Habits: The biology as recorded in India is as follows: Eggs are laid singly or in batches inside wounds, sometimes on the unbroken skin covering bruises and abscesses, and occasionally on places soiled by septic exudations and blood from wounds. Eggs hatch in about 18-24 hours. Young larvae feed on liquids exuding from the interior of the wound for about a day; later they become embedded in the living tissue. In about 6 days, the larvae become full fed, leave the wound and drop to the ground where they bury themselves about an inch beneath the surface of the soil. Pupation takes place in 1-2 days and lasts 7-9 days in hot weather of the wet season, but much longer in the cold weather of the dry season. The biotic potential of the fly is enormous; a female may produce 500-600 eggs and there may be 8 or more generations a year.

Description: ADULT - Head black on the upper surface except for the frontalia or central stripe of the front; orange on the face, antennae and palpi. Thorax and abdomen green to bluish-purple, with narrow, black posterior margins on the intermediate abdominal segments. In the female, the front is almost parallel-sided and the sides of the frontalia do not bulge in the middle. In the male, the facets of the eyes are uniform, there being no definite upper zone of larger facets and lower zone of smaller ones such as characterizes the common C. megacephala with which C. bezziana can easily be confused. The stigmatal bristle is

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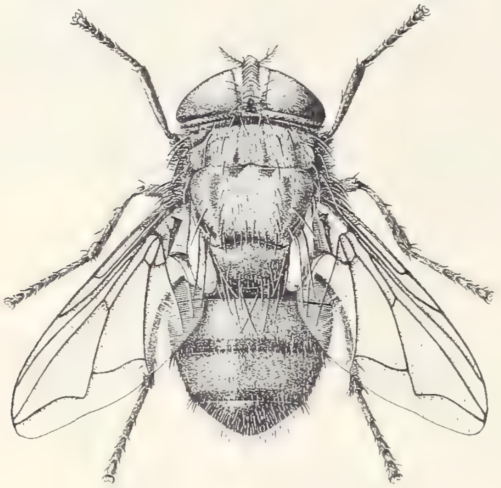
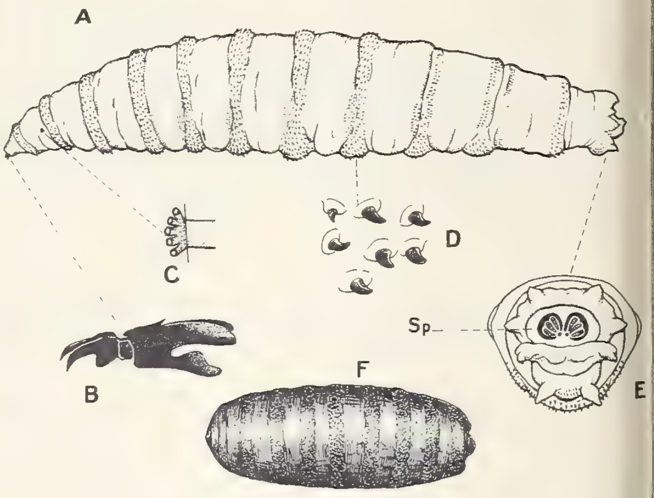
(Calliphoridae, Diptera)

well developed, the mesothoracic spiracle is brownish and the squamae are waxy-white. Length 8-12 mm. or about one-half inch. MATURE LARVA - Creamy-yellow, 14-18 mm. or about five-eighths of an inch in length and with only the usual protuberances. Mouth hooks strong. Spines in belts along the incisures are strong, being visible to the naked eye, and recurved; there are several irregular rows of spines to each belt. Anterior spiracles terminate in 4 or 5 finger-like processes.

Chrysomya bezziana adults differ from the American Cochliomyia in several ways. One differing character easy to see is the number of mesothoracic stripes; 3 prominent, black stripes will be present in Cochliomyia, while only 2 narrow, longitudinal stripes will be present on C. bezziana. The full-grown larvae also differ in several ways. An easy, recognizable character to use would be the number of finger-like processes on the anterior spiracles; C. bezziana will have 4-5, while Cochliomyia hominivorax will have 7-9 and Cochliomyia macellaria will have 9-11. (Prepared in Survey and Detection Operations in cooperation with other ARS agencies). CEIR 13(2):1-11-63.



Chrysomya bezziana, adult female



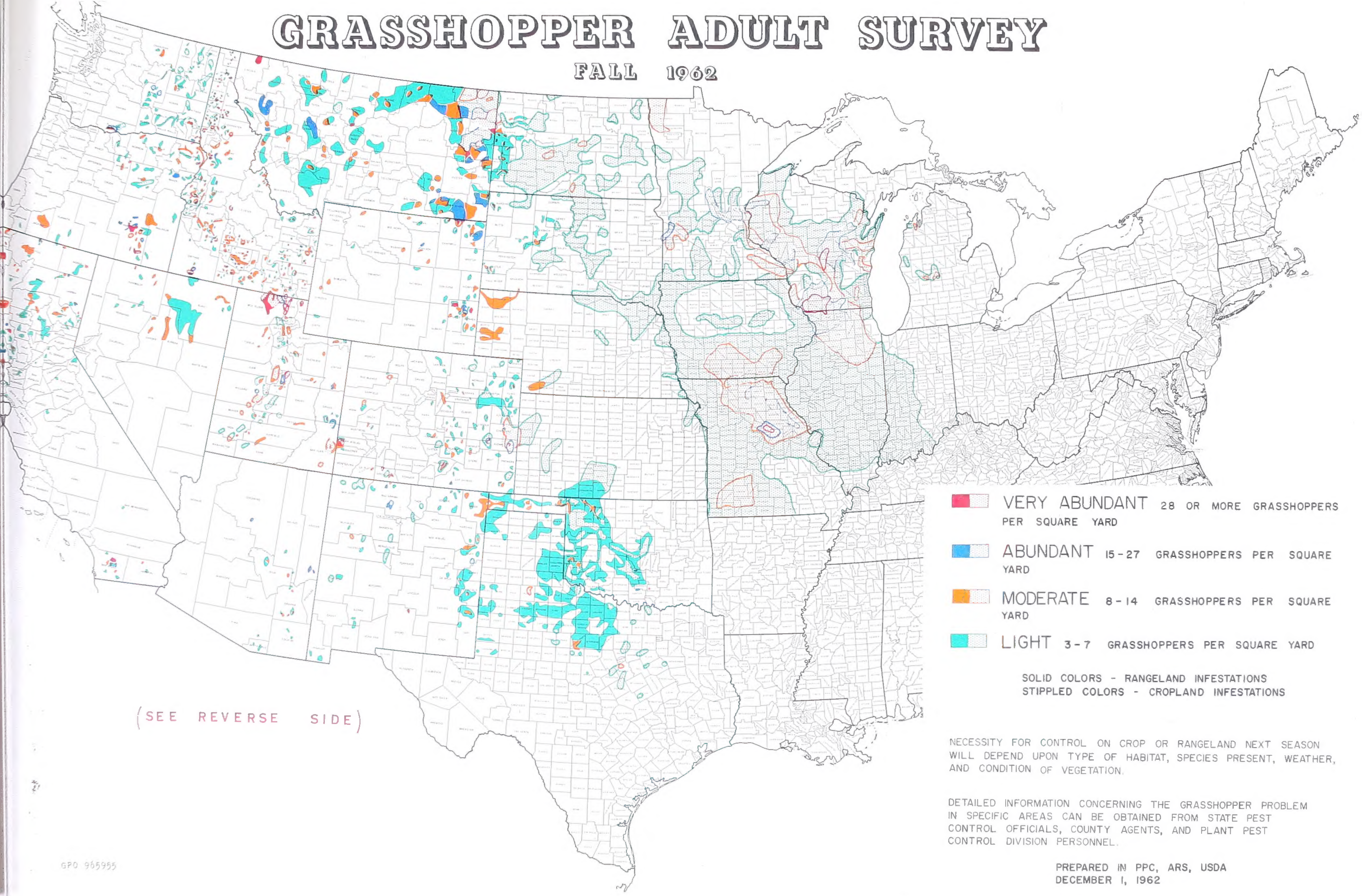
C. bezziana: A - Larva. B - Cephalopharyngeal skeleton. C - Anterior spiracle (much enlarged). D - Spines (much enlarged). E - Posterior end, showing spiracles. F - Pupa.

Major references: 1. Cuthbertson, A. 1934. Rhodesia Agr. J. 31(4):256-258. 2. James, M. T. 1947. U. S. Dept. of Agr. Misc. Pub. 631:72-74. 3. Patton, W. S. and Evans, A. M. 1929. Insects, Ticks, Mites and Venomous Animals of Medical and Veterinary Importance. Pt. I. Medical. pp. 406-495, Croydon. 4. Smart, J. 1956. A Handbook for the Identification of Insects of Medical Importance. Ed. 3 pp. 76-77, London.

Illustrations: Drawing of adult female by A. D. Cushman, USDA. Figures of larva, cephalopharyngeal skeleton, anterior spiracle, spines, posterior spiracles and pupa from Cuthbertson.

GRASSHOPPER ADULT SURVEY

FALL 1962



🟥▨ VERY ABUNDANT 28 OR MORE GRASSHOPPERS PER SQUARE YARD

🟦▨ ABUNDANT 15-27 GRASSHOPPERS PER SQUARE YARD

🟧▨ MODERATE 8-14 GRASSHOPPERS PER SQUARE YARD

🟩▨ LIGHT 3-7 GRASSHOPPERS PER SQUARE YARD

SOLID COLORS - RANGELAND INFESTATIONS
STIPPLED COLORS - CROPLAND INFESTATIONS

(SEE REVERSE SIDE)

NECESSITY FOR CONTROL ON CROP OR RANGELAND NEXT SEASON WILL DEPEND UPON TYPE OF HABITAT, SPECIES PRESENT, WEATHER, AND CONDITION OF VEGETATION.

DETAILED INFORMATION CONCERNING THE GRASSHOPPER PROBLEM IN SPECIFIC AREAS CAN BE OBTAINED FROM STATE PEST CONTROL OFFICIALS, COUNTY AGENTS, AND PLANT PEST CONTROL DIVISION PERSONNEL.

PREPARED IN PPC, ARS, USDA
DECEMBER 1, 1962

GPO 965955

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
PLANT PEST CONTROL DIVISION

TO COOPERATORS

This map is based upon the results of cooperative grasshopper adult surveys made during the late summer and fall of 1962. The survey reveals where and how many grasshoppers infest an area, and indicates the potential severity of infestations for 1963. Nymphal surveys, made in the spring, determine population densities, and indicate those areas where control may be necessary in 1963.

The infestations in croplands, shown on the map in stippling, in general are lower than those which were indicated in the 1961 fall survey. Control on those lands will be handled by the farmers with technical assistance from Division and State personnel. The infested range areas, shown on the map in solid colors (orange, blue and red only), total 7,826,670 acres in 16 Western and Midwestern States. Shaded areas on the map are diagrammatic. Within these areas, infestations may be solid or spotted.

RANGELAND GRASSHOPPER INFESTATIONS – ACREAGE BY REGIONS, FALL 1962

(Moderate Populations or Above – Orange, Blue and Red)

REGION AND STATE	LANDOWNERSHIP—ACRES		TOTAL ACRES
	PRIVATE AND STATE	PUBLIC DOMAIN	
CENTRAL			
No. Dakota	143, 800	135, 130	278, 930
So. Dakota	31, 210	4, 500	35, 710
Nebraska	500, 000	–	500, 000
WESTERN			
Arizona	10, 000	3, 100	13, 100
California	434, 070	–	434, 070
Colorado	203, 440	5, 000	208, 440
Idaho	116, 300	724, 600	840, 900
Montana	3, 253, 000	424, 000	3, 677, 000
Nevada	8, 210	73, 890	82, 100
New Mexico	151, 500	21, 500	173, 000
Oregon	280, 720	175, 180	455, 900
Utah	199, 600	244, 100	443, 700
Washington	130, 700	–	130, 700
Wyoming	290, 600	8, 400	299, 000
SOUTHERN			
Oklahoma	187, 000	–	187, 000
Texas	67, 120	–	67, 120

The survey was planned and performed by the Plant Pest Control Division, Agricultural Research Service, in cooperation with various State agencies concerned.

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